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A PICNIC TABLE FOR CHILDREN

An attractive, sturdy picnic table for children can be made from hardwood lumber at little cost. Its two seats will comfortably accommodate four children and it will not tip if weight becomes unbalanced between the two sides (fig. 1). The hardwoods used to make this table resist marring and breakage. It can be turned out in commercial shops, but can also be made by the do-it-yourselfer who is equipped with simple woodworking tools. (See insert for working drawings.)

How To Make The Table Commercially

The 36- by 45-inch table requires only 15 board feet of wood parts. Cut these from air-seasoned, 1-inch, No. 2 Common red oak or hickory lumber. The table parts are small and sound defects are permitted. This makes it possible to obtain a 70 percent yield of parts. With lumber costing about $75.00

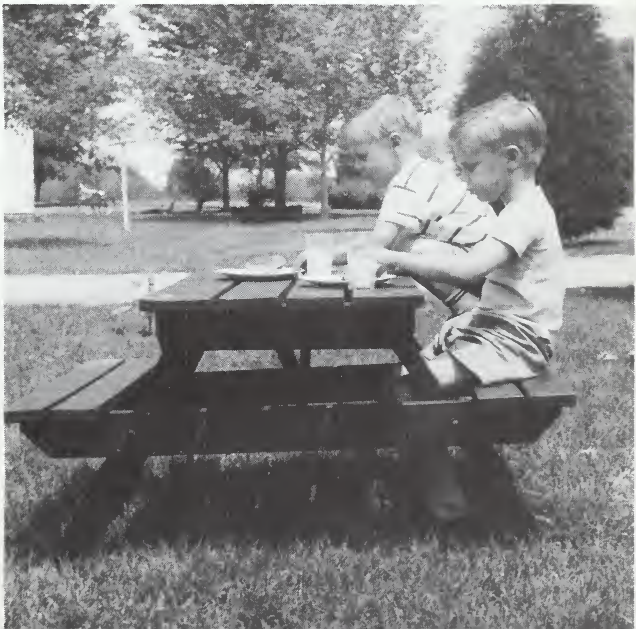


FIGURE 1.--A red oak picnic table for children. This table is unlikely to tip even if the seating becomes unbalanced.

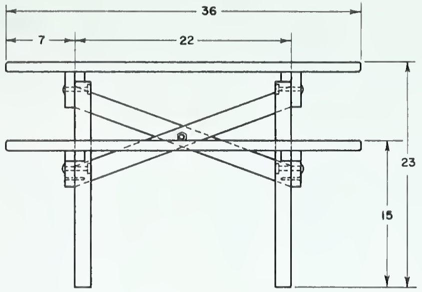
per thousand board feet, the cost of wood parts is about $1.60 per table. We estimate the cost of preservative, stain, hardware, and direct labor to be about $4.40. This total direct cost of $6.00 per table could be reduced in a commercial shop if the tables were mass produced.

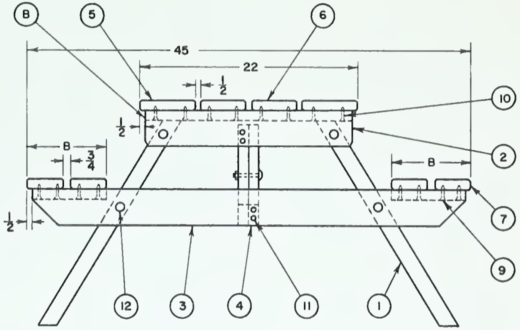
A shop with a planer, crosscut saw, ripsaw, bandsaw, and drill press can produce the tables. Crosscut or rip from the rough lumber parts free of unsound or other objectionable defects. Dress top and seat parts on two sides to a thickness of 1 inch if 1 1/4-inch rough stock is used, or to a thickness of 13/16 inch if 1-inch rough stock is used. Part thicknesses shown on the plan can be varied. Rip parts to finished width, and cut angles on a bandsaw. Legs are dressed to 1 5/8 or 1 3/4 inches square in a separate planing run.

Then drill and counter-bore screw and bolt holes in the parts. This is easily done on a drill press with the use of a positioning jig to line up the holes. Portable electric drills can also be used, but care must be taken so that holes are vertical to the board face. Drill pilot holes for the screws that extend into the top and seat boards on the heart (pith) side of boards. Thus, when assembled, the bark side of boards will be up and the top and seats of the table are less likely to shell and splinter. After drilling, round or ease all edges on all parts 1/8 inch to reduce edge splintering. This can be done easily with a plane, portable electric sander, or jointer, or with a combination of these tools.

Preservative treatment of the table parts will prevent decay and insect damage and add years of life if tables are used outdoors. Parts can be treated, after cutting to size and drilling the holes, by dipping for 5 minutes in a 5 percent solution of water-repellent pentachlorophenol preservative in mineral spirits.

The table can be assembled with ordinary hand tools. Because of the possibility of skin irritation, it may be desirable to wait until the preservative carrier has evaporated (about 2 weeks) before assembling treated parts. First, screw the top cleats to the top boards using the pilot holes mentioned above: then fasten seat boards to the seat cleats the same way. Next, bolt the top supports and seat supports to the legs. The top and seat assemblies can then be screwed to the leg assemblies. Cross-bracing is screwed in place last.





NO.	DESCRIPTION	SIZE	REQ'D
1	LEG	1-5/8 x 1-5/8 x 24-3/4	4
2	TOP SUPPORT	1 x 3-5/8 x 21	2
3	SEAT SUPPORT	1 x 3-5/8 x 44	2
4	BRACE	1 x 2 x 24	2
5	TOP BOARD	1 x 5-5/8 x 36	2
6	TOP BOARD	1 x 4-5/8 x 36	2
7	SEAT BOARD	1 x 3-5/8 x 36	4
8	TOP CLEAT	1 x 1 x 21	2
9	SEAT CLEAT	1 x 1 x 7	4
10	SCREWS (Flt. hd)	#10 x 1-1/2	52
11	SCREWS (Flt. hd)	#10 x 2	8
12	CRG. BOLTS, NUTS & WASH.	3/8 x 2-1/2	9

SPECIFICATIONS

USE LUMBER BELOW 20% MOISTURE CONTENT. ALL FINISHED PARTS MUST BE SOUND, WITHOUT LOOSE KNOTS, BARK POCKETS, PITH, OR TIGHT KNOTS OVER 1/2 INCH IN DIAMETER. EASE ALL EDGES 1/8 INCH. ALL PARTS RECEIVING 1-3/4" NO. 10 FLATHEAD SCREWS SHOULD BE DRILLED 1/8" DIA. & 1/2" DP. USE CLEATS AS DRILLING GUIDES. INSTALL SEAT & TOP BOARDS BARK SIDE UP. AFTER FABRICATION DIP PARTS FOR 5 MIN. IN A 5% SOL. OF WATER-REPELLENT PENTOCHLOROPHENOL IN MINERAL SPIRITS. FINISH THE TABLE WITH 1 BRUSH COAT OF THE F. P. L. STAIN WITH DOUBLE-STRENGTH PIGMENTS.

ASSEMBLY
of
CHILDREN'S PICNIC TABLE

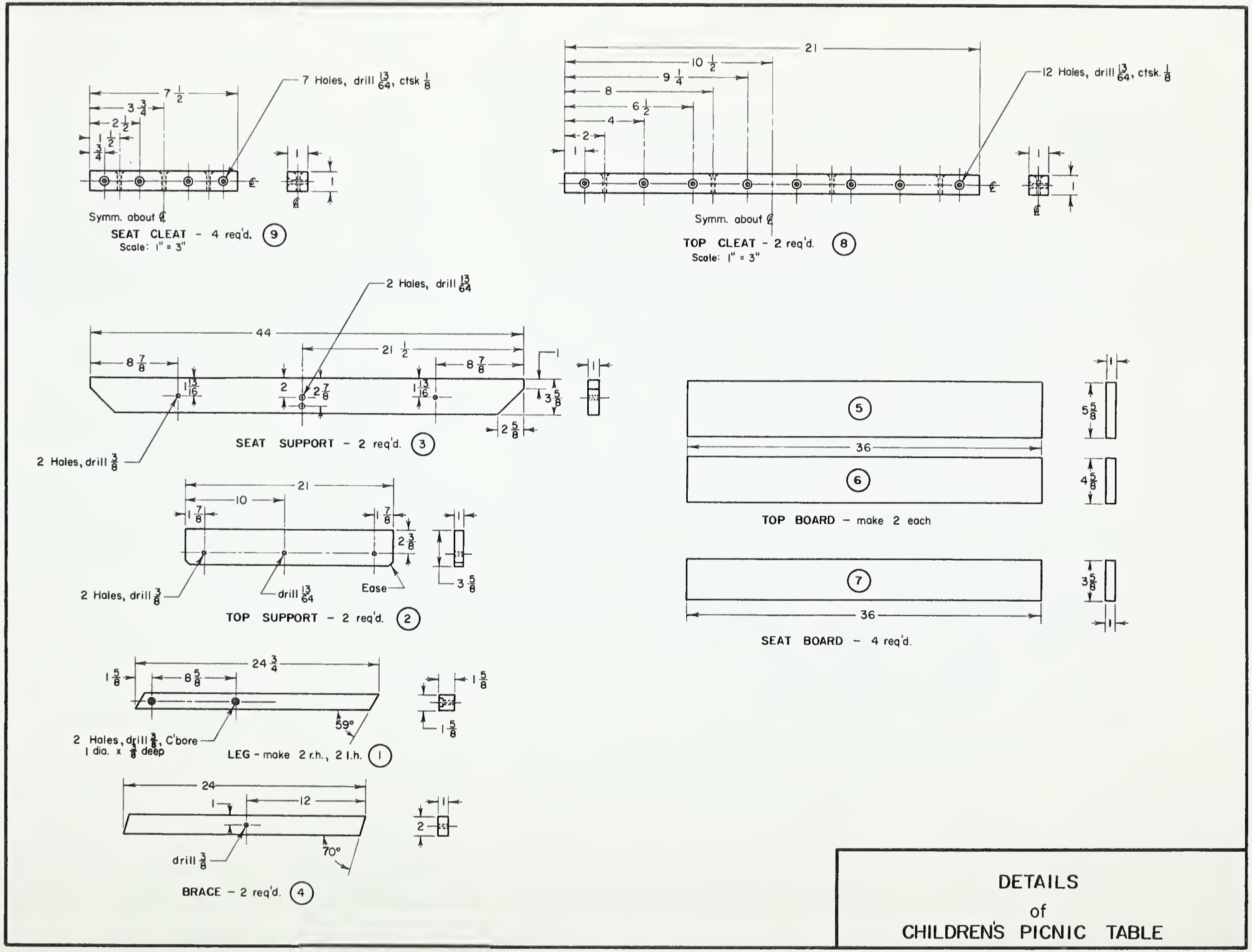
developed by the

WOOD PRODUCTS PILOT PLANT, CENTRAL STATES
FOREST EXPERIMENT STATION, U.S. FOREST SERVICE
IN COOPERATION WITH VOCATIONAL TECHNICAL
INSTITUTE OF SOUTHERN ILLINOIS UNIVERSITY

Designed By:
G. A. Cooper

1 MAY 1963

Drawn By:
R. C. Urich
K. M. Hoercher



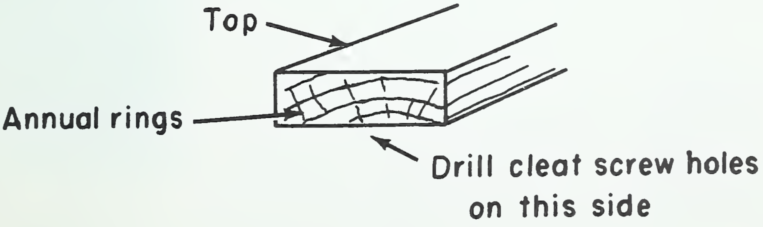
DETAILS
of
CHILDREN'S PICNIC TABLE

The assembled tables may be brush or spray finished with durable stain. The Forest Products Laboratory stain with double-strength pigments is suitable for this purpose and is easily applied and maintained.[1] Similar stains are readily available for those who do not want to bother mixing the FPL stain formula.

Tips For The Do-It-Yourselfer

You will need about 20 board feet of air-dry lumber because of the extra waste involved when making only one table. While most species of hardwood lumber that are available can be used, it is desirable to use either red oak or hickory because of their hardness and ease of treating with a preservative. If you have a planer, buy rough lumber; if not, get it dressed. Only straight boards 4, 5, or 6 inches wide should be selected and defects should be limited to sound, tight knots or other defects that will be acceptable in the finished table. Some defects add character to the table; and if they are sound, they will not weaken it. It is a good idea to lay out the table part patterns on the boards to make certain enough suitable lumber is purchased.

Cut the parts on a table saw because hand-sawing hickory or oak is very difficult. Then plane or sand the edges to minimize slivering. Drill the screw and bolt holes next, taking care to locate them as shown in the plan. The holes for screws should be counter-bored so the screwheads do not protrude. Drill the holes for the table top and seat cleats so that the bark side of these members will be the top side when the table is assembled. This simply means that the annual rings of the wood should be convex with the table or seat tops.



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[1] Forest Products Laboratory. Forest Products Laboratory natural finish. Forest Prod. Lab. Report No. 2096, 4 pp. 1961.

If the table will not be used outside, it can be finished with a stain, then lacquered or varnished. The stain can be omitted if it is desired that the natural wood color be retained.

For outdoor use the entire table, and especially the bottom ends of table legs, should be treated with one or two coats of a water-repellent preservative, with or without a stain, as desired. One way of getting good penetration of the preservative into leg ends is to set them in tin (coffee) cans. Fill the can with preservative, and let leg ends soak for an hour or so. The preservative material is usually available at hardware stores, lumberyards, or building-supply dealers.

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office maintained in cooperation
with Southern Illinois University)